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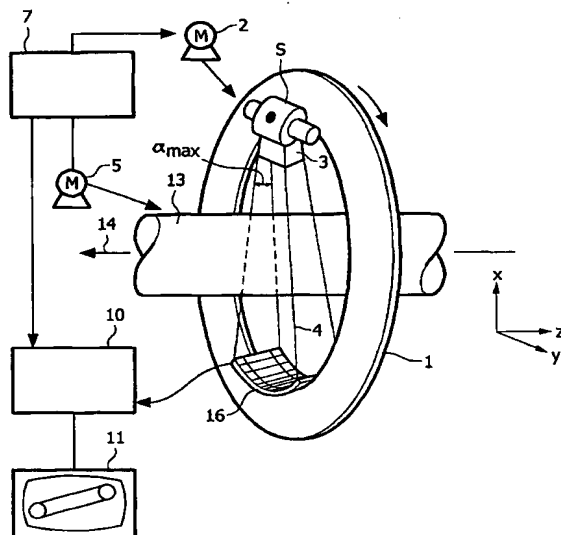
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(54) Title: **COMPUTER TOMOGRAPHY METHOD USING REDUNDANT MEASURED VALUES**



(57) Abstract: The invention relates to a computer tomography method in which a radiation source moves relative to an examination region along, in particular, a helical or circular trajectory. Measured values are acquired by a detector unit and a CT image of the examination region is reconstructed from these measured values. In the reconstruction, a complementary measured value, whose ray is oriented parallel to the ray of the respective measured value that has been acquired but in the opposite direction thereto, is determined for each of at least some measured values that lie within a reconstruction window. Redundant measured values are used to calculate the complementary measured values, with the help in particular of John's equation. The measured values for which complementary measured values have been determined are each replaced by a sum comprised a measured value that has been weighted and a complementary measured value that has been weighted, and a CT image is reconstructed, in particular by an exact method of reconstruction, from the replacement measured values, and where appropriate from acquired measured values, that lie within the reconstruction window.



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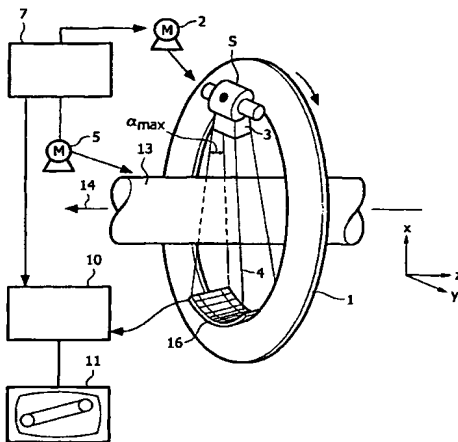
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